Claims:

1. (Currently amended) Dosing equipment for quantitative dosing of small amounts of liquids, comprising a body (1), a flexible bellows (5) attached to the body and defining a liquid space (15), a dosing tip (19) communicating with ~~the~~ said liquid space, and an actuator (7) for moving ~~the~~ said bellows so that constriction of ~~the~~ said liquid space causes a dose to be discharged from ~~the~~ said dosing tip, ~~characterized in that the~~ wherein said actuator (7) is formed of two parts (8, 9) moving relative to one another and acting magnetically on each other, one of the parts being attached to ~~the~~ said body (1) of ~~the device~~ said dosing equipment and the other being connected to ~~the~~ said movable bellows (5), one of said parts being a current coil (9) to let the movements of ~~the~~ said bellows be generated by changing the magnitude of ~~the~~ an electric current passing through ~~the~~ said coil.

2. (Currently amended) ~~Device~~ The dosing equipment according to Claim 1, ~~characterized in that the~~ wherein said actuator is formed of a permanent magnet (8) attached to ~~the~~ said body (1) of ~~the device~~ said dosing equipment, and a current coil (9) adjusted to ~~the~~ a movable end (6) of ~~the~~ said bellows (5).

3. (Currently amended) ~~Device~~ The dosing equipment according to Claim 1, ~~characterized in that the~~ wherein said actuator is formed of a current coil (9) attached to ~~the~~ said body (1) of ~~the device~~ said dosing equipment, and a permanent magnet (8) adjusted to the movable end (6) of ~~the~~ said bellows (5).

4. (Currently amended) ~~Device~~ The dosing equipment according to any of the ~~above~~ preceding claims, ~~characterized in that~~ wherein said ~~device~~ dosing equipment is provided with a flexible centralizer (13) between ~~the~~ said body (1) and the moving parts of ~~the~~ said device to linearize the movements of ~~the~~ an end (6) of ~~the~~ said bellows.

5. (Currently amended) ~~Device~~ The dosing equipment according to Claim 4, ~~characterized in that the~~ wherein said centralizer (13) is formed of three or more equally spaced parallel helical springs (14) surrounding the moving parts of ~~the device~~ said dosing equipment.

6. (Currently amended) ~~Device~~ The dosing equipment according to Claim 4 ~~or 5~~, ~~characterized in that the~~ wherein spring forces of ~~the~~ said centralizer (13) and ~~the~~ said bellows (5) have a resultant balancing ~~the~~ said end (6) of ~~the~~ said bellows at a position, on both sides of which said end (6) may move depending on the direction of ~~the~~ said electric current in ~~the~~ said current coil.

7. (New) ~~Device~~ The dosing equipment according to Claim ~~4 or~~ 5, ~~characterized in that the~~ wherein spring forces of ~~the~~ said centralizer (13) and ~~the~~ said bellows (5) have a resultant balancing ~~the~~ said end (6) of ~~the~~ said bellows at a position, on both sides of which said end (6) may move depending on the direction of ~~the~~ said electric current in ~~the~~ said current coil.

7. (Currently amended) ~~7~~ 8. ~~Device~~ The dosing equipment according to claim 6 or 7, ~~characterized in that the~~ wherein a

balance position of ~~the~~ said end (6) of ~~the~~ said bellows lies in the middle of ~~the~~ a linear path thereof.

8. (Currently amended) ~~8~~ 9. ~~Device of~~ The dosing equipment according to any of the ~~above claims~~ preceding Claims 1, 2, 3, 5, 6 or 7, ~~characterized in that the~~ wherein said body (1) of ~~the device~~ said dosing equipment comprises a cylindrical jacket (4), ~~the~~ said bellows (5) and the moving part of ~~the~~ said actuator (7) being axially arranged in sequence in ~~the~~ a space defined by ~~the~~ said jacket.

9. (Currently amended) ~~9~~ 10. ~~Device of any of the above~~ The dosing equipment according to any of the preceding ~~claims~~ Claims 1, 2, 3, 5, 6 or 7, ~~characterized in that the~~ wherein said liquid space (15) defined by ~~the~~ said bellows (5) is provided with a separate filling channel (16) for ~~the~~ said liquid to be dosed.

10. (Currently amended) ~~10~~ 11 Method for quantitative dosing of small amounts of liquids, wherein a flexible bellows (5) defining a liquid space (15) is moved by an actuator (7) connected thereto to constrict the liquid space for discharging a dose from the dosing tip (19) communicating with the liquid space, characterized in that the actuator (7) is formed of a magnet (8) and a current coil (9) co-operating therewith, one of said parts being stationarily installed and the other moving the bellows (5), the dosing being carried out by changing the magnitude of the electric current passing through the coil, so that the resulting shifting of the magnet and the coil relative to each other

generates the dosing movement of the bellows.

11. (Currently amended) ~~11~~ 12. Method according to Claim ~~10~~ 11, characterized in that the dosing is carried out from the dosing tip (19) as droplets into the air.

12. (Currently amended) ~~12~~ 13 Method according to Claim 11, characterized in that the magnitude of the electric current passing through the coil (9) is changed to set the end (6) of the bellows to an accelerated motion, and thereafter, by changing the electric current a new but in the opposite direction, this second change being smaller than the first change, the motion of the end of the bellows is slowed down, thereby to give a specific initial acceleration to the liquid to be dosed from the dosing tip (19) in the first step, and to cause a sharp separation of the liquid droplet from the dosing tip by braking action in the second step.

13. (Currently amended) ~~13~~ 14 Method according to Claim ~~12~~ 13, characterized in that the volume of the liquid droplet to be dosed is from 10 nl to 40 µl, preferably from 20 nl to 1 µl.

14. (Currently amended) ~~14~~ 15 Method according to any of the Claims ~~10-13~~ 11-14, characterized in that the dosing comprises a serial dosing carried out by means of repeated movements of the bellows (5) in one direction.

15. (Currently amended) ~~15~~ 16 Method according to Claim ~~14~~ 15, characterized in that during the serial dosing, a flexible centralizer (14) acts on the end (6) of the bellows moved by the actuator (7) causing the resultant of the spring forces of the

bellows and the centralizer to pass by a zero position at which the direction of the electric current passing through the coil (9) is reversed.

16. (Currently amended) ~~16~~ 17 Method according to any of the preceding Claims ~~10-15~~ 11, 12, 13, 14 or 16, characterized in that several parallel dosing bellows (5) are moved by the actuator (7) simultaneously to carry out a serial dosing of matrix type.

17. (Currently amended) ~~17~~ 18 Method for quantitative dosing of small amounts of liquids, wherein a flexible bellows (5) defining a liquid space (15) is moved by an actuator (7) connected thereto to constrict the liquid space for discharging a dose from a dosing tip (19) communicating with the liquid space, characterized in that the dosing is carried out as dosing of droplets from the dosing tip (19) into the air by means of an actuator (7) driven by electric current comprising the first step of setting the end (6) of the bellows to an accelerated motion by changing the magnitude of the electric current passed to the actuator to give a specific initial acceleration to the liquid to be dosed from the dosing tip, followed by the second step of slowing down the motion of the end of the bellows by changing the magnitude of said electric current in the opposite direction to cause4 a sharp separation of a liquid droplet from the dosing tip.

18. (Currently amended) ~~18~~ 19 Method according to Claim ~~17~~ 18, characterized in that the dosing comprises a serial dosing wherein change of the electric current in opposite direction in each second

step is smaller than the preceding change in the respective first step.

19. (Currently amended) ~~19~~ 20 Method according to Claim ~~17~~ 18 or ~~18~~ 19, characterized in that the volume of the liquid droplet to be dosed is from 10 nl to 40 µl, preferably from 20 nl to 1µl.